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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,639	12/29/2003	John Erickson	12104	5719
28484 7590 08/07/2007 BASF AKTIENGESELLSCHAFT CARL-BOSCH STRASSE 38, 67056 LUDWIGSHAFEN LUDWIGSHAFEN, 69056 GERMANY			EXAMINER LEE, EDMUND H	
			ART UNIT 1732	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/747,639

Applicant(s)

ERICKSON ET AL.

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-45 and 47-55 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3-45 and 47-55 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |



### DETAILED ACTION

1. Claims 5, 33-42, and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The step of mixing the hydroxide into the paint composition prior to applying the paint composition to the mold (cl 5, Ins 1-4; cl 49, Ins 1-4) is indefinite because it conflicts with the step of infusing of the independent claim. The hydroxide cannot be infused into the paint layer until after the paint layer is formed on the mold.

The step of applying the paint composition to a surface of the an open mold (cl 33, Ins 6-7) is indefinite because it is unclear as to whether or not it is related to the step of mixing (cl 33, Ins 4-5). If the paint composition of the applying step has the hydroxide therein, it should be positively and clearly recited as such.

Correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohiuddin (USPN 4350739) in view of Salem et al (USPN 2976202). In regard to claim 1, Mohiuddin teaches all of the claimed limitation (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43) except infusing the paint layer with an alkali metal hydroxide. Salem et al teach a method of improving bonding between polymers and

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polyurethanes (col 1, Ins 15-21 and 32-43; col 3, Ins 25-31 and 54-59; Table I); using a resin forming catalyst such as sodium hydroxide to the substrate (polymer) to improve bonding between the substrate (polymer) and the polyurethane layer (col 1, Ins 15-21 and 32-43; col 3, Ins 25-31 and 54-59; Table I). Mohiuddin and Salem et al are combinable because they are analogous with respect to improving bonding between a polymeric substrate and a polyurethane layer. Furthermore, both references teach the use of a reaction promoter/resin forming catalyst to improve adhesion. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use sodium hydroxide (alkali metal hydroxide) as taught by Salem et al as the reaction promoter of Mohiuddin in order to improve the adhesion of the paint layer of Mohiuddin to the polyurethane layer of Mohiuddin. In regard to claim 3, such is taught by the combination of Mohiuddin and Salem et al. In regard to claim 4, material formulation is well-known in the molding art as an important molding parameter and the desired amount of each component would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed amount is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed amount of the hydroxide in the process of Mohiuddin in order to ensure good bonding. In regard to claim 5, such is taught by the combination of Mohiuddin and Salem et al. In regard to claims 6 and 7, such is well-known in the molding as an effective means for applying a material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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spray the hydroxide onto the paint layer of Mohiuddin in order to reduce molding complexity. In regard to claims 8-11, such are taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 12, such is well-known in the molding art as a conventional step to aid in the removal of molded parts. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a mold release to the mold of Mohiuddin in order to achieve the above result. In regard to claim 13, such is well-known in the molding art as an effective means for applying a material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to spray the hydroxide onto the paint layer of Mohiuddin in order to reduce molding complexity. In regard to claims 14 and 15, such are well-known in the molding art as an effective means for initiating the formation of polyurethane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to initiate the formation of the polyurethane of Mohiuddin by one of the claimed methods in order improve the process efficiency of Mohiuddin. In regard to claim 16, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 17, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 18, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claims 19-20, such are well-known in the molding art as an effective means for initiating the formation of polyurethane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to initiate the formation of the polyurethane of Mohiuddin by one of the claimed methods in order improve the process efficiency of

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Mohiuddin. In regard to claim 21, mold temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the mold of Mohiuddin to the claimed temperature in order to effectively cure the materials. In regard to claim 22, such is taught by the combination of Mohiuddin and Salem et al.

4. Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohiuddin (USPN 4350739) in view of Salem et al (USPN 2976202). In regard to claim 23, Mohiuddin teaches all of the claimed limitation (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43) except infusing the paint layer with an alkali metal hydroxide. Salem et al teach a method of improving bonding between polymers and polyurethanes (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I); using a resin forming catalyst such as sodium hydroxide to the substrate (polymer) to improve bonding between the substrate (polymer) and the polyurethane layer (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I). Mohiuddin and Salem et al are combinable because they are analogous with respect to improving bonding between a polymeric substrate and a polyurethane layer. Furthermore, both references teach the use of a reaction promoter/resin forming catalyst to improve adhesion. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use

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sodium hydroxide (alkali metal hydroxide) as taught by Salem et al as the reaction promoter of Mohiuddin in order to improve the adhesion of the paint layer of Mohiuddin to the polyurethane layer of Mohiuddin. In regard to claim 24, the use of a specific material is a mere obvious matter of choice dependent on the desired final product and material availability and of little patentable consequence to the claimed process.

Further, the claimed material is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed material in the process of Mohiuddin in order to ensure effective bonding. In regard to claim 25, such is well-known in the molding art as an effective means for applying a material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to spray the hydroxide within the claimed range onto the paint layer of Mohiuddin in order to reduce molding complexity. In regard to claim 26, such is well-known in the molding art as a conventional step to aid in the removal of molded parts. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a mold release to the mold of Mohiuddin in order to achieve the above result. In regard to claim 27, such is taught by Mohiuddin (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43). In regard to claim 28, such is taught by Mohiuddin (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43). In regard to claims 29-30, such are well-known in the molding art as an effective means for initiating the formation of polyurethane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to initiate the formation of the polyurethane of Mohiuddin by one of the claimed methods in order improve the process



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efficiency of Mohiuddin. In regard to claim 31, mold temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the mold of Mohiuddin to the claimed temperature in order to effectively cure the materials. In regard to claim 32, such is taught by the combination of Mohiuddin and Salem et al.

5. Claims 33-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohiuddin (USPN 4350739) in view of Salem et al (USPN 2976202). In regard to claim 33, Mohiuddin teaches all of the claimed limitation (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43) except infusing the paint layer with an alkali metal hydroxide. Salem et al teach a method of improving bonding between polymers and polyurethanes (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I); using a resin forming catalyst such as sodium hydroxide to the substrate (polymer) to improve bonding between the substrate (polymer) and the polyurethane layer (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I). Mohiuddin and Salem et al are combinable because they are analogous with respect to improving bonding between a polymeric substrate and a polyurethane layer. Furthermore, both references teach the use of a reaction promoter/resin forming catalyst to improve adhesion. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use

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sodium hydroxide (alkali metal hydroxide) as taught by Salem et al as the reaction promoter of Mohiuddin in order to improve the adhesion of the paint layer of Mohiuddin to the polyurethane layer of Mohiuddin. In regard to claim 34, the use of a specific material is a mere obvious matter of choice dependent on the desired final product and material availability and of little patentable consequence to the claimed process.

Further, the claimed material is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed material in the process of Mohiuddin in order to ensure effective bonding. In regard to claim 35, such is well-known in the molding art as an effective means for applying a material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to spray the hydroxide within the claimed range onto the paint layer of Mohiuddin in order to reduce molding complexity. In regard to claim 36, such is well-known in the molding art as a conventional step to aid in the removal of molded parts. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a mold release to the mold of Mohiuddin in order to achieve the above result. In regard to claim 37, such is taught by Mohiuddin (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43). In regard to claim 38, such is taught by Mohiuddin (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43). In regard to claims 39-40, such are well-known in the molding art as an effective means for initiating the formation of polyurethane. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to initiate the formation of the polyurethane of Mohiuddin by one of the claimed methods in order improve the process

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efficiency of Mohiuddin. In regard to claim 41, mold temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the mold of Mohiuddin to the claimed temperature in order to effectively cure the materials. In regard to claim 42, such is taught by the combination of Mohiuddin and Salem et al.

6. Claims 43-45 and 47-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohiuddin (USPN 4350739) in view of Salem et al (USPN 2976202). In regard to claim 43, Mohiuddin teaches all of the claimed limitation (col 1, lns 22-38; col 2, lns 22-44; col 3, lns 6-14 col 26-43) except infusing the paint layer with an alkali metal hydroxide. Salem et al teach a method of improving bonding between polymers and polyurethanes (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I); using a resin forming catalyst such as sodium hydroxide to the substrate (polymer) to improve bonding between the substrate (polymer) and the polyurethane layer (col 1, lns 15-21 and 32-43; col 3, lns 25-31 and 54-59; Table I). Mohiuddin and Salem et al are combinable because they are analogous with respect to improving bonding between a polymeric substrate and a polyurethane layer. Furthermore, both references teach the use of a reaction promoter/resin forming catalyst to improve adhesion. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to use sodium hydroxide (alkali metal hydroxide) as taught by Salem et al as the reaction promoter of Mohiuddin in order to improve the adhesion of the paint layer of Mohiuddin to the polyurethane layer of Mohiuddin. In regard to claim 44, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 45, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 47, such is taught by the combination of Mohiuddin and Salem et al. In regard to claim 48, material formulation is well-known in the molding art as an important molding parameter and the desired amount of each component would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed amount is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed amount of the hydroxide in the process of Mohiuddin in order to ensure good bonding. In regard to claim 49, such is taught by the combination of Mohiuddin and Salem et al. In regard to claims 50 and 51, such is well-known in the molding as an effective means for applying a material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to spray the hydroxide onto the paint layer of Mohiuddin in order to reduce molding complexity. In regard to claim 52, such is taught by Mohiuddin (col 1, Ins 22-38; col 2, Ins 22-44; col 3, Ins 6-14 col 26-43). In regard to claim 53, such is well-known in the molding art as a conventional step to aid in the removal of molded parts. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a mold release to the mold of

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Mohiuddin in order to achieve the above result. In regard to claim 54, mold temperature is well-known in the molding art as an important molding parameter and the desired temperature would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, the claimed temperature is generally well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the mold of Mohiuddin to the claimed temperature in order to effectively cure the materials. In regard to claim 55, such is taught by the combination of Mohiuddin and Salem et al.

7. Applicant's arguments with respect to claims 1,3-45 and 47-55 have been considered but are moot in view of the new ground(s) of rejection.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following US patents teach the state of the art: 5017634, 4356230, 4314962, 3378531, 3047540, 4800123, and 4486370.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571.272.1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EDMUND H. LEE

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Primary Examiner  
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EHL

*/Edmund Lee/*

Primary Examiner, A.U. 1732